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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,256	02/20/2002	Kenneth K. Li	2138-239	3227

6449 7590 10/28/2003

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EXAMINER

PAYNE, SHARON E

ART UNIT PAPER NUMBER

2875

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,256

Applicant(s)

LI, KENNETH K.

Examiner

Sharon E. Payne

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BW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 3, 11-27 and 29-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-10, 28 and 34-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Objections

1. Claim 2 is objected to because of the following informalities: claim 1 is attached onto the end of claim 2; it needs to be removed. Appropriate correction is required.

Double Patenting

2. Claims 1, 34 and 36 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,227,682 in view of Fjaestad et al. (U.S. Patent 5,873,646).

Claim	Claims of U.S. Patent 6,227,682	Fjaestad et al.	difference
1	1 and 2	filament lamp (abstract)	
34	1 and 2	filament lamp (abstract)	
36	1 and 2	filament lamp (abstract)	First and second reflector portions are symmetrical with collinear axes.

Regarding claims 1,34 and 36, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the filament lamp of Fjaestad et al. in the apparatus of Li (U.S. Patent 6,227,682) to provide a filament image on the reflectors.

Regarding claim 36, making the reflectors symmetrical with collinear axes is considered to be an obvious variation in design. Since symmetrical reflectors are well known in the art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use symmetrical reflectors in the device of U.S. Patent 6,227,682 to ensure that most of the light is collected by the second reflector portion.

3. Claim 2 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,227,682 in view of Fjaestad et al. (U.S. Patent 5,873,646) as applied to claim 1 and further in view of Strobl (U.S. Patent 5,414,600), hereinafter Strobl 600.

Claim	Claims of U.S. Patent 6,227,682	Fjaestad et al.	Strobl 600
2	1 and 2	Filament lamp (abstract)	A spherical retro-reflector (reference number M4) disposed on a side of the filament lamp opposite the first reflector structure to reflect electromagnetic radiation emitted from the filament lamp in a direction away from the additional reflector toward

			the first reflector structure through the first focal point of the first reflector structure (Fig. 8).
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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the spherical retro-reflector of Strobl 600 on one side of the filament lamp of Fjaestad et al. in the apparatus of U.S. Patent 6,227,682 to reflect light from the lamp back into the lamp to the reflector on the other side of the lamp.

4. Claim 4 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,227,682 in view of Fjaestad et al. (U.S. Patent 5,873,646) as applied to claim 1 and further in view of Strobl (U.S. Patent 6,356,700 B1), hereinafter "Strobl 700."

Claim	Claims of U.S. Patent 6,227,682	Fjaestad et al.	Strobl 700
4	1 and 2	Filament lamp (abstract)	A tungsten filament lamp (column 37, lines 55-60)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the tungsten filament lamp of Strobl 700 in the apparatus of U.S. Patent 6,227,682

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to achieve a higher color temperature and operate more efficiently. See Strobl 700, column 37 in lines 65-67.

5. Claims 5 and 6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,227,682 in view of Fjaestad et al. (U.S. Patent 5,873,646) as applied to claim 1 and further in view of Dorman (U.S. Patent 4,149,227).

Claim	Claims of U.S. Patent 6,227,682	Fjaestad et al.	Dorman
5	1 and 2	Filament lamp (abstract)	A first reflector structure that has a coating that reflects substantially only a pre-specified portion of the electromagnetic radiation spectrum (column 9, line 66, to column 10, line 5)
6	1 and 2	Filament lamp (abstract)	The pre-specified portion as visible radiation (column 9, line 66, to column 10, line 5).

Regarding claims 5 and 6, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the coating of Dorman in the apparatus of U.S. Patent 6,227,682 to take the infrared portion of the spectrum out of the light, resulting cool light.

6. Claims 7, 9 and 10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,227,682 in view of Fjaestad et al. (U.S. Patent 5,873,646) as applied to claim 1 and further in view of Goldenberg et al. (U.S. Patent 4,956,759).

Claim	Claims of U.S. Patent 6,227,682	Fjaestad et al.	Goldenberg et al.
7	1 and 2	A filament lamp (abstract)	An output light pipe (reference number 40) having an input surface and an output surface (Fig. 1), the input surface being located proximate to the second focal point to collect substantially all of the radiation (Fig. 1) wherein the

			output surface transmits substantially all of the radiation (column 2, lines 57- 60).
9	1 and 2	A filament lamp (abstract)	A tapered light pipe (Figs. 1-4)
10	1 and 2	A filament lamp (abstract)	A light pipe having a rectangular cross- section (Fig. 4).

Regarding claims 7, 9 and 10, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the tapered light pipe having a rectangular cross-section with an input surface at the second focal point of Goldenberg et al. in the apparatus of U.S. Patent 6,227,682 to conduct light from the second focal point to another location.

7. Claim 8 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,227,682 in view of Fjaestad et al. (U.S. Patent 5,873,646) and Goldenberg et al. (U.S. Patent 4,956,759) as applied to claim 7 and further in view of Junginger (U.S. Patent 3,772,506).

Claim	Claim of U.S. Patent No. 6,227,682	Fjaestad et al.	Goldenberg et al.	Junginger

8	1 and 2	A filament lamp (abstract)	An output light pipe (reference number 40) having an input surface and an output surface (Fig. 1), the input surface being located proximate to the second focal point to collect substantially all of the radiation (Fig. 1) wherein the output surface transmits substantially all of the radiation (column 2, lines 57-60).	A glass light pipe (column 2, lines 65-68).
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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the glass light pipe of Junginger in the apparatus of U.S. Patent No. 6,227,682 for conducting light.

8. Claims 28, 35 and 37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 28 of U.S. Patent No. 6,619,820 in view of Fjaestad et al. (U.S. Patent 5,873,646).

Claim	Claim of U.S. Patent 6,619,820	Fjaestad et al.	Difference
28	28	Positioning a filament lamp at a first focal point on a first reflector structure (Fig. 3) and producing rays of radiation by the filament lamp (Fig. 3); and reflecting at least part of a portion of the rays of radiation that do not impinge directly on the first reflector structure toward the first reflector structure through the first focal point of the first reflector structure (Fig. 3, reflector 46)	
35	28	Same as above.	First and second reflector

			portions are paraboloidal
37	28	Same as above.	First and second reflector portions are arranged substantially symmetrical with collinear axes.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the filament lamp and the step of reflecting rays back to the first reflector structure of Fjaestad et al. in the process of U.S. Patent 6,619,820 to provide light and reflect it back to the first reflector structure. See Fig. 3 of Fjaestad et al.

Regarding claims 35 and 37, using paraboloidal or symmetrical reflectors are considered to be obvious variations in design. Since paraboloidal reflectors and symmetrical reflectors are well known in the art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use paraboloidal reflectors or symmetric reflectors in the process of U.S. Patent 6,619,820 to collimate and collect most of the light.

Response to Arguments

9. Applicant's arguments with respect to claims 1, 2 4-10 and 28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Li (U.S. Patent 6,616,304) discloses a temperature control for an arc lamp.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

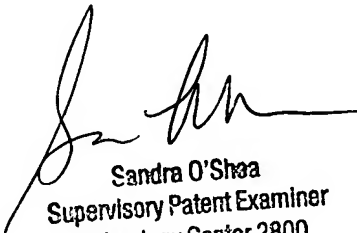
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon E. Payne whose telephone number is (703) 308-2125. The examiner can normally be reached on regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

sep



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800